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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,820	03/09/2004	Yoshikatsu Kamisuwa	T000-P03021US	2034
33356	7590	08/01/2006	EXAMINER	
SoCAL IP LAW GROUP LLP 310 N. WESTLAKE BLVD. STE 120 WESTLAKE VILLAGE, CA 91362			KO, TONY	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/796,820

Applicant(s)

KAMISUWA ET AL.

Examiner

Tony Ko

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/16/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### ***Election/Restrictions***

1. Claims 19-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected color signal compensation circuit, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/24/06.

### **DETAILED ACTION**

#### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. Page 1 of the specification, the applicant needs to set forth the application number to fill in the blank at line 14.

#### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 2, 3, 7 and 13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 9, 13, 14 and 15 of copending Application No. 10/796,819. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application claims photo converters that utilizes the monochrome and three primary colors. For example, Claim 1 in the present application is obvious over claim 14 of application 10/796819. The claim of the present invention recites: an image sensor unit comprising: a first photoconverter comprising a first array of first light receiving element (first light receiving element in 10/796,819), the first photoconverter for photoelectrically converting light of a first light quality from a source image for outputting first signals by photoelectric conversion, the first signal by photoelectric conversion, the first signals having a first image quality; a second photoconverter comprising a second array of second light receiving elements, the second photoconverter for photoelectrically converting light of a second light quality from the source image for outputting second signals (a second photoconverter) by photoelectric conversion, the second signals having a second image quality, wherein the second image quality is better than the first image quality, a signal correction unit to produce first enhanced signals corresponding to the first light quality from the source image; use the second signals to modify the first signals to produce the first enhanced signals (claim 14 of 10/796,819). This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Cardot (U.S. Patent 6,831,761).

8. Regarding claim 1, Cardot discloses an image sensor unit comprising: a first photoconverter comprising a first array of first light receiving elements (29r), the first photo converter for photoelectrically converting light of a first light quality from a source image (scanned image) for outputting first signals by photoelectric conversion, the first signal having a first image quality; a second photo converter comprising a second array of second light receiving elements (27), the second photo converter for photoelectrically converting light of a second light quality from the source image for outputting second signals by photoelectric conversion, the second signals having a second image quality, wherein the second image quality is better than the first image quality; a signal correction unit (51) to produce first enhanced signals corresponding to the first light quality from the source image; use the second signals to modify the first signals to produce the first enhanced signals (67B, Col. 6, Lines 31-40).

9. Regarding claim 7, Cardot discloses a process for producing image signals comprising: providing a first photoconverter comprising a first array (the single linear

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array 29r) of first light receiving elements; providing a second photo converter (27) comprising a second array of second light receiving elements; the first photoconverter photoelectrically converting light of a first light quality from a source image (from the scanner); the second photoconverter photoelectrical converting light of a second light quality from a source image (from scanning); outputting first signals from the first photoconverter having a first quality of a characteristic (color); outputting second signals from the second photoconverter having a second quality of the characteristic better than the first quality; enhancing the first quality using the second signals (col. 6).

10. Regarding claim 13, Cardot discloses receiving a first color image signal for a first color; receiving a second color image signal for a second color; receiving a third color image signal for a third color; receiving monochrome image signals for black and white; improving a quality of at least one of the first, second, and third color signals using information in the monochrome signals (abstract).

11. Regarding claims 2 and 8, Cardot discloses the first photoconverter is a color photo converter; the second photo converter is a monochrome photoconveter.

12. Regarding claims 3 and 9 and 15, Cardot discloses the first light quality comprises a first color; the second light quality comprises black and white; the image sensor comprises a third photoconverter comprising a third array of third light receiving elements (29g), the third photoconverter for photoelectrically converting light of a third light quality from the source image (scanned) for outputting third signals by photoelectric conversion, the third light quality comprising a second color different from the first color; the image sensor comprises a fourth photoconverter comprising a fourth array of fourth

light receiving elements, the fourth photoconverter (29b) for photoelectrically converting light of a fourth light quality from the source image for outputting fourth signals by photoelectric conversion, the fourth light quality comprising a third color (blue) different from the first color (red) and the second color (green); the signal correction unit further to produce second enhanced signals corresponding to the third light quality from the source image; produce third enhanced signals corresponding to the fourth light quality from the source image; use the second signals to modify the third signals to produce the second enhanced signals; use the second signals to modify the fourth signals to produce the third enhanced signals.

13. Regarding claims 4 and 10, Cardot discloses a color mode, wherein the image sensor outputs color signals and monochrome signals (63).

14. Regarding claim 5 and 12, Cardot discloses the signal correction unit is further for improving the color signals' gradation (67A). (Color/Gamma correction)

15. Regarding claim 6, Cardot discloses the color signals are signals of three primary colors and the signal correction unit is for converting the three primary (RBG) color signals and the monochrome signals to data indicating color characteristic.

16. Regarding claims 11 and 16, the characteristic comprises resolution (Fig. 2A) improvement (Abstract).

17. Regarding claim 14, Cardot discloses the first color is red, the second color is green and the third color is blue (Fig. 2A).

18. Regarding claim 13, Cardot discloses improving the quality by obtaining brightness signals from the monochrome image signal (abstract, Col. 5-6).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Ko whose telephone number is 571-272-1926.

The examiner can normally be reached on Monday-Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKO



THANH X. LUU  
PRIMARY EXAMINER